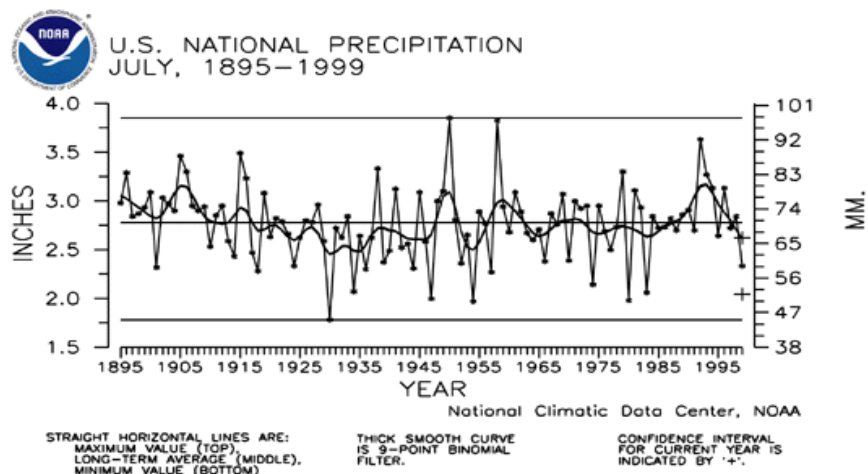
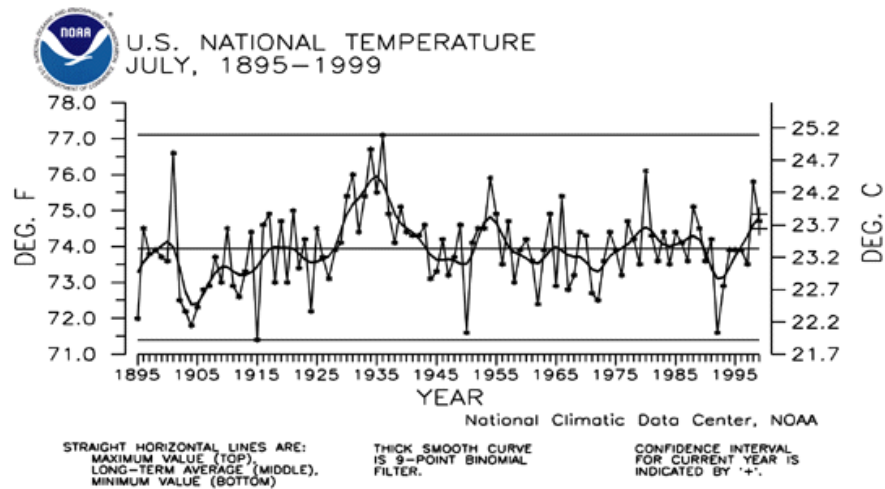


Monthly Activity Report

July 1999

National Climatic Data Center

A National Resource for Climate Information



Preliminary data for July 1999 indicated that the monthly mean temperature averaged across the contiguous U.S. was warmer than the long-term mean, and ranked as the 22nd warmest July since 1895. About 12 percent of the country was much warmer than normal, while about four percent of the country was much cooler than normal.

Based upon preliminary data, July 1999 ranked as the 13th driest July on record. Nearly 13 percent of the country was much drier than normal, while about 13 percent of the country was much wetter than normal.

DIRECTOR'S HIGHLIGHTS

UNISPACE III Exhibition

Tom Ross of the National Climatic Data Center participated as a member of the National Oceanic and Atmospheric Administration's (NOAA) delegation at the UNISPACE III Exhibition in Vienna, Austria, July 14-24, 1999. UNISPACE III is the third global gathering of United Nations members to discuss the peaceful uses of outer space. The exhibition showcased global achievements of space technology, and highlighted current and future development tools. Specialized agencies of the United Nations, including the World Meteorological Organization and the Food and Agricultural Organization, as well as agencies from more than 150 nations, non-governmental space organizations, manufacturers, users of space technology, and government decision-makers, were in attendance.

NOAA's 30th Anniversary

In anticipation of the National Oceanic and Atmospheric Administration's (NOAA) 30th anniversary on October 3, 2000, the National Climatic Data Center (NCDC) submitted several photographs to commemorate the event. The photographs included several views of the Veatch-Baley Federal Building, where NCDC performs its mission, along with several historic satellite images.

These included the first TIROS image, a Geostationary Operational Environmental Satellite (GOES) -3 image of the Mt. St. Helens eruption, a NOAA-11 visible image of the Mt. Pinatubo eruption, a composite image of the aerosol optical thickness before and after the Pinatubo Eruption, and assorted images of noteworthy hurricanes.

WSR-88D Level III

The Advanced Weather Information Processing System (AWIPS) Program Office has asked the National Climatic Data Center (NCDC) to become one of five test sites with the National Center for Environmental Protection Forecast Systems Laboratory, and the National Weather Service (NWS) Headquarters for the electronic transfer of Next Generation Weather Radar Level-III products on a National scale. This system will replace NIDS and the re-transmission of missing data from NOAAPort in the operational AWIPS environment. Under this test, 20 NWS Central Region sites will centrally collect Level-III data. These data will then be "multi-cast" to NCDC over existing T-1's from the Silver Spring, MD, complex.

CLIMATE DATA AND INFORMATION SERVICES

♦ Database Development

Data Rescue Activities

During the month of July, the Meteorological Paper Imaging project shipped 2,344 boxes of paper records to the West Virginia contractor.

This gives a total of 38,001 units shipped, or approximately 16 million pages. A total of 142 CD-ROMs were received from the contractor, with these containing over 1 million images. In total, the National Climatic Data Center (NCDC) has now received 1,954 CD-ROMs containing 14.7 million images. A total of 1,819 of the CD-

ROMs have been processed through the quality assurance program.

During the month, it was decided that the paper records would be returned to NCDC. These records have been held at the contractor's site for nearly a year pending a final decision. The return shipments will begin in early August 1999. Hyland Software continues to work on the next release of the OnBase software based on NCDC's need to utilize the Hierarchical Data Storage System. The final version of the software is expected to be installed in early August.

Approximately 500 fiche per week are continually being shipped to Image Entry (IE) for keying under MMK1 (Cooperative Observations). During July, 2,567 fiche were shipped to IE for keying under the Data Rescue project, bringing the total to 15,657 since the beginning of the project. To date, 26 cartridges of keyed Cooperative daily data have been returned to NCDC containing data from 10,140 fiche. Sixty-five percent of the data shipped to IE has been keyed and returned to NCDC.

♦ Data and Information Distribution

Climate and Health

Robert Quayle of the National Climatic Data Center (NCDC) was interviewed by Deborah Moffitt of the Wilmington, Delaware, *News Journal* concerning the recent heat wave, global warming, climate variations in the U.S.A., climate and human health, and related issues. She will download graphics from the NCDC web site, and will be in touch with the State Climate Office in Newark, Delaware.

Monthly Climate Report

The availability of the National Climatic Data Center's (NCDC) Monthly Climate report is being advertised via CLIMLIST, a moderated international electronic mail distribution list for persons undertaking research in climatology, teaching climatology and providing services of a

climatological nature. The climate monitoring group plans on expanding these promotional announcements to other groups and institutions.

North American Radiosonde CD-ROM Update

The "Radiosonde Data of North America" CD-ROM series has been updated to include data for 1997. In the latest update, the Version 1.0 Period of Record (POR) double jewel box was not reprinted, so it still contains 4 CD's with the most recent data being 1996. The Version 2.0 single CD update now includes data from 1994-1997. If a customer orders the POR Radiosonde Data CD set, NCDC will supply both the Version 1.0 POR CD set and the single Version 2.0 1994-1997 CD. A customer can order only the single-CD 1994-1997 Version 2.0 update.

Climatic Extremes and Weather Events Web System

The Extremes/Events system (on the NCDC home page: www.ncdc.noaa.gov) is being visited at a significantly greater frequency than in the past, with over 133,000 logged hits during June, the highest of any National Climatic Data Center system. This is not surprising given the public, news media, and research interest in these topics. The system is regularly updated, with the most recent update being the Weather Events of 1991-1999 page, which now links to the just-released Climate Watch page for July 1999.

Billion Dollar Weather Disasters Report

This report on the web has been updated, describing U.S. billion dollar weather disasters for the period 1980-1999. The report is accessible from <http://www.ncdc.noaa.gov/extremes.html> and paper copies are also available. The updated report adds two events -- severe thunderstorms/hailstorms in Minnesota in May 1998 and the tornado outbreak in Oklahoma and Kansas in May 1999. Overall, 42 events occurred over the past 20 years, with 36 of these during 1988-1999. This report has proven to be quite popular at conferences, and a number of web sites (especially news media) have links to it.

Hourly Precipitation Data Supplied Online

During test phases of the Climate Data Online (CDO) system, the National Climatic Data Center (NCDC) supplied Paul Neiman of the NOAA Environmental Techniques Laboratory hourly precipitation data (TD-3240) for November 1997 through March 1998 for California, Oregon, and Washington. The aforementioned meteorological data were selected in an ASCII fixed-length record format. Mr. Neiman is conducting a research project which correlates precipitation and topographical relationships during El Niño years.

Server Consolidation Study

The National Climatic Data Center (NCDC) completed a questionnaire for 13 file servers as part of the Department of Commerce study for consolidating file servers. This was a follow-on activity to an earlier study which described the basic Information Technology (IT) infrastructure at NCDC.

♦ Congressional Requests

Constituents Receive Assistance

Mr. Neal O'Hara of the National Oceanic and Atmospheric Administration Public Affairs Office was asked by Senator John Kerry's (D-MA) Office to assist a constituent in acquiring Cooperative data from the National Climatic Data Center (NCDC). The data were subsequently faxed within a day.

Mr. O'Hara was also provided information to satisfy a request from Congressman Bill McCollum's (R-FL) office. The request was for a list of tropical storms and hurricanes that hit the Tampa, FL, area in the last 50 years. *Tropical Cyclones of the North Atlantic Ocean, 1871-1992*, its updates through 1997, and a combination of background information found on the Internet at several NCDC sites were used. Mr. O'Hara was also provided several web site URLs.

♦ Requests from News Media

New York Times Article Focuses on NCDC Satellite Pages

A highly complimentary article which referred to the National Climatic Data Center's (NCDC) satellite web pages was published in the *New York Times* on July 22nd. The article, which focused on several satellite-related web pages authored or managed by NCDC personnel, began by highlighting "The Perfect Storm" web page. Reference was specifically made to Geostationary Operational Environmental Satellite (GOES) images described in other articles from a series of web pages entitled "The Satellite's Eye Art Gallery." In addition, the *New York Times* article referenced data from the Historical GOES Browse Server, and mentioned images from the web page, "Images/Movies of Hurricanes and Special Events."

Drought Now a Growing Concern

The *Washington Times* and *ABC World News Tonight* both contacted the National Climatic Data Center (NCDC) regarding the intensifying drought covering much of the nation, especially in the Northeast. The Times was interested in the immediate Washington, D.C. area, whereas ABC World News was interested in how this drought ranks with previous ones. After NCDC personnel had examined Palmer Drought Severity Index (PDSI) values, both news organizations were informed that the state now being most affected by the drought is Maryland. The month with the lowest PSDI value so far in the current Maryland drought was December 1998 when the value reached -4.60. Since 1895, only two other Maryland droughts have had months with lower numbers (indicating more severe droughts) than the current one. Those occurred in 1930-1931 with an extreme value of -6.90 and 1965-1966 with an extreme value of -5.32.

Drought in New England

A journalist with the *Litchfield County Times* obtained Cooperative climate records for 1999 for

three selected stations near Litchfield County, CT . The paper used the data to demonstrate the differences in precipitation for drought years, such as 1999, and earlier wet years. To answer their questions, monthly precipitation data were provided using the annual editions of the National Climatic Data Center (NCDC) publication *Climatological Data: New England* for the period 1989-1998. The web page address for the most recent Palmer Drought Index charts from the Climate Prediction Center was also supplied to the reporter.

♦ Private Industry Interactions

Serially Complete Daily Data

The National Climatic Data Center (NCDC), the Natural Resources Conservation Service (NRCS), and the Climate Diagnostic Center (CDC) are co-sponsoring a project to produce a serially complete data set of daily temperature and precipitation for the U.S. The source file is the NCDC TD3200 archive file of data from Cooperative and National Weather Service sites. The NRCS has completed work on stations west of the Mississippi River and plan to begin analysis of data for stations in the eastern half of the U.S. The data set covers the period 1951 - 1990. NCDC has rewritten UNISYS software to run on a UNIX platform and query the Oracle database to identify and inventory sites to be included in the project. Inventory files for each state and data element that define the data availability and quality will be produced over the next few weeks.

♦ Interesting Requests

NCDC Data Used in Balloon Expedition

A European-based ballooning team contacted the National Climatic Data Center (NCDC) to obtain climatological data which will be used in a balloon flight over the Arctic Ocean. The balloonists' preliminary plans are to depart in late March 2000 near the city of Sredne in Siberia, Russia, and terminate the flight somewhere over the United Kingdom in May. The NCDC provided the

expedition team with the *Global Upper Air Climatic Atlas (GUACA)* CD-ROM. The team will extract the wind patterns at a flight level of 20,000 feet along with temperature and moisture characteristics before determining a final route.

World Tour Regatta

The Norfolk, VA, Chamber of Commerce requested the National Climatic Data Center (NCDC) publication *Local Climatological Data (LCD)* for the period January 1995 through May 1999. A global regatta celebrating the 2000 millennium, will be sailing past Norfolk, which will include some of the largest sailing ships in the world. The race will start in Australia and travel eastward across the South Pacific around Cape Horn, South America. The regatta will continue northward where the participants will make their way to New York via Norfolk. The Chamber is expecting almost two million visitors for the regatta, and will use the LCDs to determine local climatological conditions.

John F. Kennedy, Jr.

The National Climatic Data Center (NCDC) was contacted by two separate Federal Aviation Administration (FAA) investigators, one located in Boston, and the other affiliated with Otis Air National Guard Base, MA, who are helping conduct the probe into John F. Kennedy, Jr.'s, fatal plane crash. The NCDC provided hourly surface weather observations for July 17, 1999, for Martha's Vineyard Airport. Additionally, the *New York Daily News* ordered hourly surface weather observations for Martha's Vineyard and Caldwell, NJ, for July 16 and 17. Caldwell was the departure point for the ill-fated Kennedy party. The meteorological data are being used to determine if weather played an integral part in the deaths of John F. Kennedy, Jr., his wife, Carolyn, and her sister Lauren. The aforementioned data were retrieved from NCDC's Service Records Retention System and provided to the investigating authorities for the period in question.

Nuclear Testing

An independent television producer based in Brisbane, Australia, contacted the National Climatic Data Center (NCDC) to obtain meteorological data to be used in an upcoming documentary. The television program will focus on France's nuclear weapons tests that were carried out between 1966 and 1974 on and around the Moruroa Atoll, in the Tuamotu Archipelago, French Polynesia. The gentleman is concentrating most of his research on the first test of the campaign that occurred on July 7, 1966. The test was deemed a success, but there was a shift in the wind direction and the radioactive cloud passed over the island of Mangareva, in the Gambier Archipelago, southeast of Moruroa. The NCDC offered the producer tropical strip surface charts for the period in question.

♦ **Technology Applications**

Climate Data On-Line (CDO) Orders Increasing

On June 22, 1999, the National Climatic Data Center (NCDC) placed its new CDO system into full on-line operational mode. A total of 31 orders were placed in the first nine days. More than 1 gigabyte of data was downloaded during July. The CDO system contains 100 gigabytes of climate in-situ data stored in an Oracle relational database. WWW users may now place orders through the system via the NNDC Online Store, pay for the data with a credit card, and receive the data via ftp-all without any manual intervention by customer service personnel. It is expected that orders for climate data will continue to increase daily as customers discover the system.

Satellite Data Products

The National Climatic Data Center is now archiving Advanced TIROS Operational Vertical Sounder (ATOVS) System and Sea Surface Temperature (SST) Local Analysis (14 km) products through the automated IBM 3494 robotic system. Plans are underway for archiving Microwave Surface and Precipitation Products

System (MSPPS), Interactive Multi-sensor Snow and Ice Mapping System (IMS), Radiation Budget, and other SST products in the same manner.

♦ **Regional and State Climate Centers**

Regional Climate Center Activities

The Regional Climate Centers' (RCC) Directors met with Tom Karl and Steve Doty of the National Climatic Data Center (NCDC) during the annual meeting of the American Association of State Climatologists (AASC). The major issues of discussion included the challenge of developing a business plan, the integration of the RCCs into the NOAA Virtual Data System, and the opportunity to interact with NCDC staff in the development of new initiatives. A working group was appointed to begin the drafting of a business plan, two representatives from the AASC will also be added to the group. The Directors were invited to NCDC in the late fall to begin the initiatives development.

State Climatologist Activities

The State Climatologists from Colorado and North Carolina visited the National Climatic Data Center (NCDC) during the month under the State Climatologist Exchange Program.

Dr. Sethu Raman and his assistant, Ryan Boyles, from North Carolina presented a seminar and worked with several NCDC staff members. The NC State Climate Office has grown from zero to a full time staff of 4 in just over 2 years under the leadership of Dr. Raman. Dr. Roger Pielke, Sr., the State Climatologist for Colorado, also visited the Center, presenting a seminar and interacting with various staff members. Two more State Climatologists will be visiting NCDC in September under the 1999 Exchange program.

Proposal

Steve Doty of the National Climatic Data Center, Dick Reinhardt, Director of the Western Regional Climate Center; and George Taylor, President of the American Association of State Climatologists

(AASC), presented a proposal to the AASC entitled *A Rejuvenated State Climate Program for the United States*. This proposal created a lot of discussion among the 26 State Climatologists in attendance. The proposal will undergo some revision and a companion document will be written. This second document will be a scaled down version of the larger proposal and will be written with a “sales” emphasis so that the individual State Climate Offices can use it to gain support.

NCDC/RCC Customer Services Meeting

Several National Climatic Data Center (NCDC) employees participated in the NCDC/Regional

Climate Centers (RCC) Customer Services meeting hosted by NCDC the week of June 28, 1999. Status of the Climate Atlas project and how the RCCs can help in the review of map products were discussed. Demonstrations of how ArcView is being used to create maps and quality control data for this project were presented. The status of the CLIM20 work was discussed and the prototype of the long-term climate means web page that is under development was presented.

SCIENTIFIC AND PROFESSIONAL ACTIVITIES

♦ **Working Groups/Committees/ Meetings**

NWS Coop Program Metadata Modernization

The National Weather Service (NWS) Cooperative Program Office has initiated an effort to upgrade the current Cooperative Station Service Accountability (CSSA) database system, which includes Cooperative station metadata report form B-44. (AAB ingests and processes about 5000 B-44 forms annually.) The first step at this metadata modernization is a review of CSSA requirements. NCDC/AAB and the Regional Climate Centers (RCCs) have sent first round comments on requirements to the NWS.

USDA Metadata Project

Anne Lazar of the National Climatic Data Center traveled to Portland, OR, for contract work with the USDA/NRCS National Water and Climate

Center. Most work involved database development in their Air and Water Database, and building structures to hold data element and station instrument information.

UCAN Project

The National Climatic Data Center's (NCDC) historical station metadata, from the Master Station History Report product, has been loaded into the Unified Climate Access Network project metadata database, and testing of metadata search engines tools is underway. Testing of the monthly update mechanism is nearing completion. The Regional Climate Centers (RCC) are participating in a review of NCDC station metadata; stations with identifier discrepancies and locational anomalies as identified with Geographic Information System analysis. The Northeast Regional Climate Center has set up an Internet-based review process where RCCs review select stations and post modifications for NCDC to apply to the SHIPS database.

ESRI User Conference

Andy Goss of the National Climatic Data Center attended the 19th Annual Environmental Systems Research Institute (ESRI) Users Conference in San Diego July 26-30, 1999. This is the largest Geographical Information System (GIS) event in the world, with over 8,000 attendees. The conference included seminars, workshops, presentations and demonstrations. ESRI is the developer of the highly acclaimed PC based ArcView software which is being used in several projects throughout the Center.

Rooftop Bias Study

A National Climatic Data Center employee participated as the Center's representative in the Earth System Data and Information Management funded Rooftop Bias Study during the week of June 28th. Other participants were from the Colorado Climate Center, National Weather Service (NWS) Western Region Headquarters, NWS Office of Meteorology, and WRC-TV, Washington, DC. The study objectives include quantifying biases that rooftop measurements exhibit under different synoptic conditions and instrument exposures, and providing data users with information on the effects these biases are having on the representativeness and usefulness of temperature data which have been (and could be) collected and distributed by the National Oceanic and Atmospheric Administration. The project is expected to have a duration of two years. There was an organizational meeting in Ft. Collins, CO, and then a field trip to several unofficial and/or collocated Cooperative sites near Riverton, WY.

♦ Visitors

Brazilian Meteorological Service Personnel Visit

Lieutenant Commander Antonio Ricardo Nunes Guimaraes of the Brazilian Meteorological Service visited the Customer Services Branch during the morning of July 29th. He was provided an

overview of customer services activities, including phone operations, customer servicing statistics, and inventory and resource availability. Specific presentations were conducted on servicing satellite and Next Generation Weather Radar (NEXRAD) data.

Dr. David Travis Visits To Discuss Data Access

Dr. David J. Travis of the Department of Geography at the University of Wisconsin-Whitewater visited on July 6th. He was provided information about satellite data and access to the Satellite Active Archive (SAA) and to Geostationary Operational Environmental Satellite (GOES) data to include National Climatic Data Center (NCDC) imaging capabilities. A National Environmental Satellite, Data, and Information Service (NESDIS) snow cover product and the new Climate Data On-Line (CDO) system were also described and the use of the CDO on accessing Cooperative data demonstrated to him. Dr. Travis intends to use both the satellite data and Cooperative data to study temperature variations across freshly fallen snow. The CDO system was configured to accept Dr. Travis' e-mail address and an open account with funds established to debit against for the data.

Educators in Industry Program

Ms. Laura Roberts, an environmental science teacher at Enka High School, visited the National Climatic Data Center (NCDC) July 21-23, 1999. She is this year's participant in the Educators in Industry program. She was provided an overview of the Center's activities to help achieve a better understanding of skills students will need in the next millennium workplace. Ms. Roberts spent time in each of Center's Divisions and Branches. She completed two lesson plans related to using climate data available on NCDC's WWW site that she will use for her classes this year. The lesson plans will also be made available to all science teachers in Buncombe County.

EMPLOYEE ACTIVITIES

♦ EEO and Community Outreach

Federal Women

Jo Ann Sceizina represented the National Climatic Data Center at the Federal Women's Conference in Phoenix, Arizona, July 17-24th. This conference was sponsored by the Federally Employed Women (FEW), an international organization based in Washington, DC. FEW is a world-wide organization with 365 chapters in 39 states, the District of Columbia, and several foreign countries. The organization's objectives are to remove sex discrimination in the Federal Government and to promote equality. FEW is an effective lobbying organization pressuring Congress and the Administration on women's issues. Approximately 3000 federally employed women attended this conference.

♦ Personnel Resources

New Employee

The National Climatic Data Center (NCDC) welcomes a new employee, Dr. Richard Reynolds,

to the Scientific Services Division. In his new job at NCDC, he will be responsible for conducting research and development of a coordinated marine climate program, including leading the NCDC COADS development efforts. His duties will require him to stay in Washington, DC, for an extended period. However, he will visit NCDC once a quarter.

♦ Training

Leadership Training

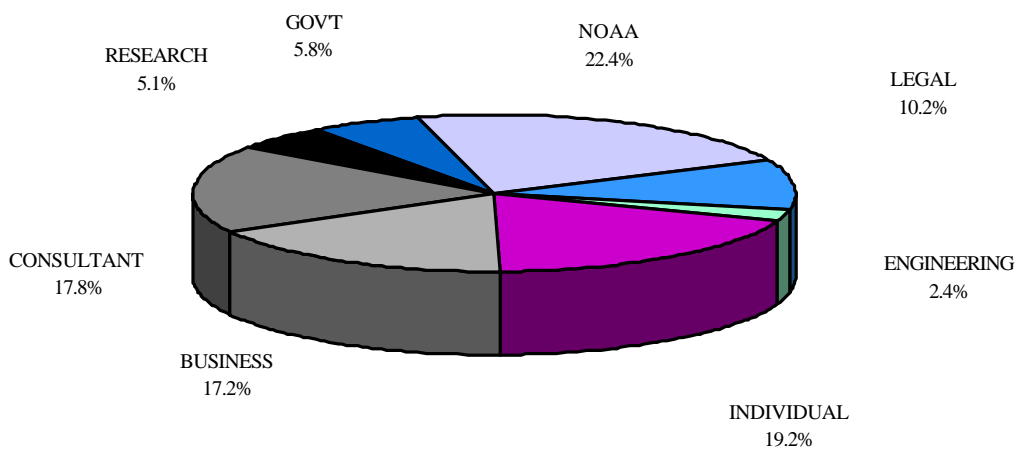
Dr. Tom Peterson, Acting Chief, Scientific Services Division, and Vernell M. Woldu, the new Customer Service Branch Chief at the National Climatic Data Center, participated in the National Oceanic and Atmospheric Administration's Leadership Training Program in Silver Spring, MD, in July.

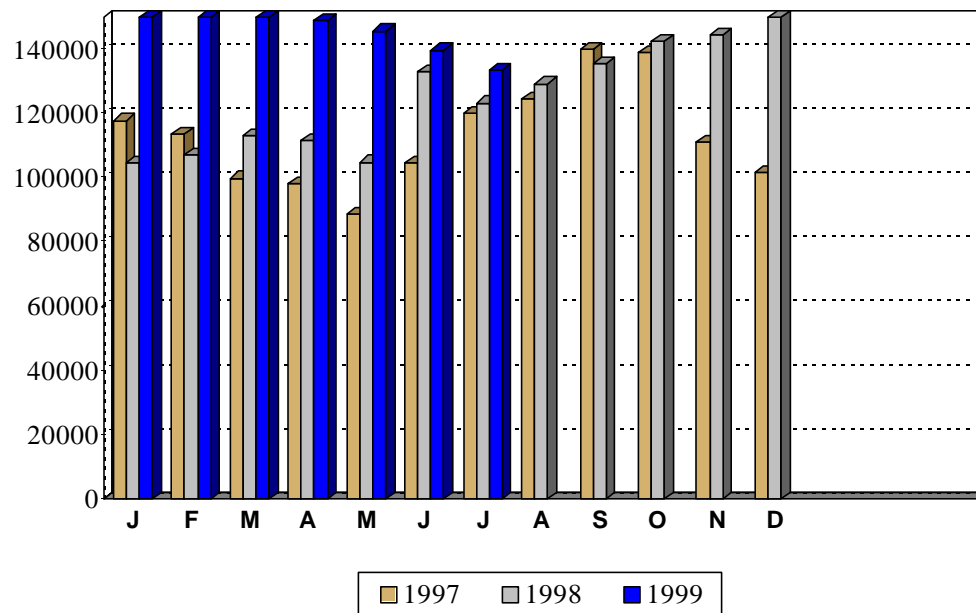
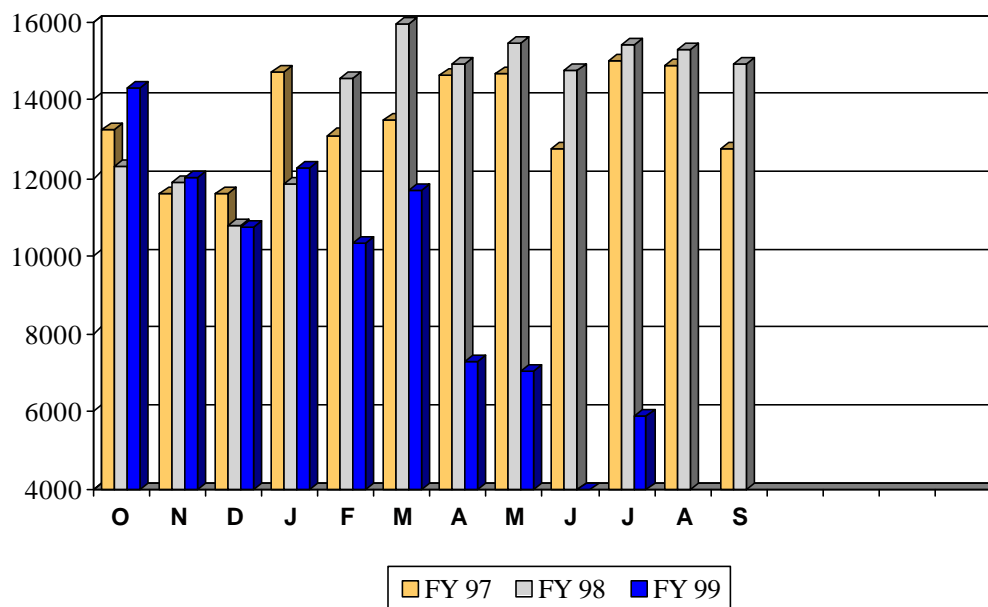
The following charts and graphs show the latest National Climatic Data Center user and data statistics.

Customer Profile Based on Orders

Data not available for July

Customer Profile Based on Order Cost



NCDC On-Line Users**NCDC Off-Line Customer Contacts**

NCDC Data Downloaded